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ABSTRACT

This two-part report describes a study conducted to investigate the relationship between the community college and its economic environment. Section I provides an introduction to the debate on community college mission, outlines the theoretical framework of the study, reviews the characteristics of the community colleges' economic environment, and describes four types of economic development activities currently being undertaken by community colleges: conventional occupational programs; linkages with such community organizations as firms, unions, professional organizations, and noncollegiate training programs; state-sponsored economic development programs; and international trade education. This section also describes the purposes and methods of a pilot research project conducted to determine a single institution's mission through a formal investigation of its environment. The pilot study was conducted at Miami-Dade Community College (Florida) using a survey instrument mailed to members of the business community who were selected on the basis of their broad knowledge of economic conditions, their prior association with the college, and their standing within the community. This "expert jury" was asked to rank the importance of 31 college functions and to indicate whether those functions should be supported with tax funds. Section II presents the findings of the research project. An extensive bibliography and the survey instrument are included. (EJV)

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ECONOMIC DEVELOPMENT AND THE AMERICAN COMMUNITY COLLEGE

By

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FOREWORD

A fundamental issue that continually faces community colleges is that of mission. That every community college exists in a unique environment clearly abrogates the possibility of establishing a universal mission. Previous research has provided only limited guidance for the individual institution seeking to formulate a mission within its own service area. This study developed the theoretical basis and a model process for determining institutional missions via the formal investigation of institutional environments.

The study was conducted in four stages. First, the conceptual framework was developed from a review of the literature related to general systems theory. The community college was identified as a social organization, a subset of open living systems, acutely dependent upon its external environment for essential resources and the legitimization of institutional goals. Second, the economic environment of American community colleges was described on the basis of a further environments. Winston Richter has outlined an outstanding procedure for making a study of a community in order to identify the mission of an individual community college. He has developed a questionnaire that others will want to use. He has provided a directive to follow.

John Wahl assisted by taking on the task of editing the more lengthy original study into the format herein presented. The Institute of Higher Education is pleased to add the study to those already available.

James L. Wattenbarger
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September, 1987

SECTION I

INTRODUCTION

The community college, as an educational entity, is young. However, its youth belies its size, rate of growth, and propensity for further development. Becoming increasingly characteristic of the community college is the typical adolescent search for identity. According to Cross (1981), new ideals have not yet emerged to fill the void created by waning enthusiasm and a lost sense of common purpose. "Meanwhile, community colleges sit, not altogether comfortably, on a plateau assimilating and consolidating the social change of the 1950's and 1960s, concerned about what the future holds" (p. 113).

And the future is uncertain. As the flow of traditional college-age students dwindles, other sectors of education have begun to compete for what has customarily been the community college market.

> The evidence is considerable, for example, of high schools being pressured to provide better basic education and of four year colleges attempting to inject career education into traditional baccalaureate programs. Both segments of education have for years operated extensive continuing education programs and are now beginning to further their involvement in this area to absorb the many new learners in the higher education marketplace. (Alfred, 1979, p. 23)

Educational subsystems compete, not only for students, but for resources and prestige. In its infancy, the community college opened its doors to those not invited

elsewhere; it, therefore, posed no threat even though "the community college was philosophically, geographically, and economically constituted to be all things to all people" (Vaughan, 1984, p. 38).

McCartan (1983), after reviewing the community college literature written between 1979 and 1981, notes that "a need for reflection, reassessment, and reform pervades this writing in a stronger sense that the usual turn-of-the decade analysis" (p. 677). In other words, the dissonance is not just rhetoric, but a cumulative quest for consensus missions, based on the realization that what has been accepted in the past is being challenged by both the students and the taxpayers.

Vaughan (1984) concluded that

> the people's colleges are at a point of crisis: they are facing problems never dreamed of when they became a focal point of the nation's drive to democratize higher education. The community college is reexamining its priorities, its resources, and its mission. However, community colleges are failing to come up with definitive answers. Indeed, the community college is facing a crisis of identity that may prove to be as significant as any other event in its development. The decisions made now may well determine the future of a major segment of higher education. (p. 38).

An example of the crisis in mission is the debate regarding whether the associate degree is still the principal function of the community, technical, and junior college. Richardson (1985) insisted that the reasons for the traditional primacy of the degree-granting function are

changeless, regardless of time and place. He wrote of community college founders:

> They wanted students to have access to degree programs that would make a significant difference in their lives. They did not work to establish institutions to compete with YMCA's in offering leisure time activities or to subsidize private industry in the retraining of their workers. Even though times may change, the needs of important segments of our population have not. (p. 70)

If the various missions, the goals, of a sector of education or of an individual institution are not periodically questioned and systematically evaluated by those involved, others tend to step into the vacuum and assume the evaluative role. The community college is particularly vulnerable in this regard because it answers to numerous masters. Criticisms come from

> businesses who hired graduates fresh out of college and were stunned to find how poorly they could read, write, and count. Similar noises came from universities plagued by students whose requisite knowledge for upper-level courses was sorely lacking. The grumbling came from the graduates who learned a pragmatic lesson soon after commencement: a sheepskin does not guarantee the skills to succeed in either the business or academic worlds. Finally, the complaints came from legislators whose threats to take matters into their own hands materialized as mandatory competency tests for diplomas and skepticism about spending any additional money on public education. (Dubocq, 1981, p.26)

The community college must consolidate its position, its purview, its territory; it must be prudent in the use of scarce public resources; it must reconfirm its role relative to the salvage of individuals not destined for the baccalaureate degree; it must be alert to the economic and

political impacts of its programs within the community (Alfred, 1979). When such evaluation is not sought, or sought and not heeded in a responsible manner, the result is an educational institution unresponsive to its community and clients - and the obviation of control to forces outside of the ken of the college.

Community college missions are "truly evolutionary in nature" (Nespoli & Martorana, 1983-84, p.3). It is the responsibility of each community college to resolve how each of its missions fits into the overall scheme of its own economic-political sphere. Breneman and Nelson (1981) expected

> community colleges to respond to the uncertainty and challenges ahead in diverse ways, depending upon which direction appears most suited to each institution's particular circumstances. Community college leaders must draw upon the unique strengths of their own institution as they seek to resolve the inevitable dilemma posed by changing missions and restrictive financing. (p. 215)

The mandate for the evaluation of missions by individual community colleges is clear. The time is also propitious for such evaluations to be of major significance in shaping the future. Nespoli and Martorana (1984) contended:

> Recent political history in this country suggests that organizations closest to the needs of the people can be the most effective in playing the political game. As "the people's colleges," community colleges are in a position to play that game very well.
>
> Given the current direction of community college missions, the time is right for a more proactive approach in dealing with public policy makers at the

> local, state, and even national levels. Whether or not community college leaders will press their advantages to the fullest extent possible remains to be seen. (p. 11)

The Study

This study was an investigation of the relationship between the American community college and its economic environment and was approached in two ways:

1. An analysis of descriptive occurrences in which the economic development activities of American community, junior, and technical colleges demonstrate the actions of an open system adapting to its environment.

2. A determination of the environmentally sanctioned mission of one comprehensive, urban community college with regard to the economic development of its service area.

Theoretical Framework

Community colleges are social organizations, a subset of open, living systems. As such, they are acutely dependent upon their external environments for essential resources and the legitimization of institutional goals. While the environment is ambiguous and heterogeneous when viewed from different points in the institution, it is factorable so that interactions may be analyzed one at a time. Sources of information about the environment include

community experts, the professional literature, and critical events as interpreted by cosmopolitan actors within the organization.

The essential function of the community college is to define and implement goals recognized as necessary by society. Absent the distinct advantage of domestication, the support of community colleges is closely tied to the quality of institutional performance; accordingly, adaptation to environment changes is imperative. The accomplishment of such adaptation is clearly the responsibility of strategic level administration. A collateral function is to maintain organizational stability by buffering the technical core from non-routine inputs from the environment. The literature of systems theory provides a number of suggestions to facilitate the accomplishment of this dual role.

Finally, the formulation of institutional change requires the assessment of nationwide antecedents and the input of community experts. Moreover, its transformation into political reality requires the support of community influentials. The concepts guided the design and conduct of the case study of one institution; they underlie the institution's projected usage of the research findings.

Characteristics of Community College Economic Environment

Examination of the economic environment in which community colleges operate has revealed a number of

conditions with significant implications for the continuing development of conventional occupational education programs and other more specialized forms of training in American community colleges. These are summarized as follows.

1. Between 1982 and 1995, the American economy is ex-expected to generate 25.6 million new jobs. These will be distributed across a wide range of industries and an even wider range of occupational classifications. Training and retraining at several levels and in numerous fields will be required.
2. The vast majority of new jobs will require training at the high school and community college levels.
3. Relatively few new jobs will require the four-year college degree - fewer than one-fourth of the detailed occupations predicted to create the most new jobs by 1995.
4. The oversupply of college graduates is expected to continue; the shortfall of college degree-requiring positions could reach 300,000 per year.
5. Employment in high-technology industry will continue to grow faster than for industry overall but will provide relatively few new jobs in absolute terms - only 16 to 17 percent of all new jobs through 1995.
6. While high technology workers constitute a small

percentage of the total workforce, their contributions are indispensable to the industries in which they are employed, and thus to the nation's economy. Moreover, high technology industry can have a significant impact on a local economy.

7. High technology equipment and processes have permeated virtually all sectors of industry, greatly changing their operations and the skills needed by workers.
8. High technology's long-term net effect upon employment volume is unclear; that it will increase the need for lifelong retraining seems certain.
9. The service-producing sector is expected to continue its rapid ascendency relative to the goods-producing sector, the former generating three-fourths of all new jobs through 1995.
10. The great majority of the new service jobs will involve the creation, processing, and distribution of information, requiring workers with strong cognitive skills.
11. The effective utilization of information, the growth rate of which continues to accelerate, is seen as the key to the nation's future productivity, competitive strength, and economic achievement.

12. International commerce has grown to account for nearly a quarter of America's Gross National Product, an outcome simultaneously representing expanded markets and fierce competition.

13. Record high trade deficits over the past several years have placed the nation in net debtor status for the first time since 1914. Dramatically improved performance in the conduct of foreign trade is clearly essential.

14. For the remainder of the twentieth century, the economic welfare of the nation will be conditioned primarily on the accomplishments of the "baby boom" generation, a group identified as possessing skills of questionable utility in the contemporary work place.

15. As the knowledge base continues to expand, greatly increasing the cognitive demands of the work place, the nation faces a skills crisis of the following dimensions: (1) high school graduates whose skills are weak in comparison to traditional standards and to those of their contemporary counterparts in other developed nations, (2) a backlog of functional illiteracy among the adult population, and (3) a serious mismatch between skills possessed and skills required.

16. America has an aging workforce in place and a

diminishing supply of new prospects to train. A much larger proportion of future workers will come from female, minority, and non-English-speaking groups.

17. The nation must make better use of people already in the labor market and do a better job of cultivating the untapped and largely untrained reservoir of worker prospects in the population.

Economic Development Activities

The economic development activities undertaken by American community colleges demonstrate the behavior of an open system adapting to conditions in its economic environment. These activities are conveniently described in terms of four major thrusts.

1. Conventional occupational education programs lie at the heart of the community college economic development effort. These fill the need for training at less than the baccalaureate level across a broad range of occupational specialties. A number of feedback processes have evolved for maintaining them in a state of dynamic equilibrium within the environment. These include detailed feasibility studies to determine the need for new programs, continuing program audits to ascertain the need for revision, and articulation with feeder high schools to insure a smooth transition of students from one

level to the other. Developmental education components provide a humanistic influence and respond directly to the cognitive demands of the information age. Broad initial training and access to lifelong retraining provide means of coping with the highly changeable nature of the contemporary world of work. And finally, the provision of cooperative work experience opportunities, career counseling, and job placement services seeks to improve the match between skills possessed and skills required.

2. Linkages with organizations in the community are further evidence of adaptation to environment. Contract programs respond to a broad range of highly specialized training and retraining needs identified by client firms. Cooperation with unions and professional organizations spans the entire range from developmental education, to information skills, to high technology training. Faculty/staff exchanges provide essential inputs - updated competencies for current faculty, specialized skills in short supply, and feedback relative to the design and management of programs. And articulation with noncollegiate training programs increase the flow of another valuable resource,

students with prior training potentially eligible for advanced placement and program acceleration.

3. State sponsored economic development programs illustrate several systems theory concepts. The state, as suprasystem, provides essential inputs in the form of targeted funding and official confirmation of community college role. Sensitivity to feedback from resources providers, competitors, potential partners, and facilitators is required to legitimize that role within the community. Statewide coordination promotes functional unity among all institutions participating in the effort; various specialized subsystems have evolved to accomplish this. The retention of local autonomy addresses each institution's need for boundary maintenance and homeostatic control of its internal processes. Active participation by business and industry provides other essential inputs, including monetary and in-kind contributions, the identification of training needs, and technical assistance in program development. And equifinality is illustrated by the variety of strategies with which the states through their community colleges have attempted to attract new industry, revitalize existing ones, reduce unemployment, assimilate high

technology, and improve the performance of small businesses.

4. Finally, as depicted in the literature, the community college response to international impingements within the economic environment, while expanding, is still a phenomenon in its infancy. The nation's need for improved performance in the conduct of foreign trade has been addressed at two levels. Some community colleges have introduced courses or modules related to foreign trade into the occupational curriculum, thereby reaching students preparing to enter the work force. Others have carried global perspectives directly to business and industry. Finding sparse financial resources at the state and local levels for such endeavors, the latter colleges have depended primarily on support from the next higher level of the suprasystem, the federal government. Limited attempts have been made to export the benefits of mid-level technical training to the world community. This has involved the provision of technical assistance to foreign institutions engaged in occupational education and the training of foreign technicians and teachers in this country. The effort has depended almost exclusively upon federal and foreign sponsorship.

Determining the Economic Development Mission of a Single Institution

In applying the systems approach to the study of organizations and their management, it is essential to start with the environmental suprasystem rather than any internal subsystem (Kast & Rosenzweig, 1974). The suprasystem sets the limits of variance for system behavior (Katz & Kahn, 1966). Clearly such application must be done on a case by case basis, due to the uniqueness of each institution's environment. To demonstrate the feasibility of determining a single institution's mission through a formal investigation of its environment, a cast study of one comprehensive urban community college was undertaken. This served the three-fold purpose of (1) validating a model process that other institutions could follow, (2) providing specific directions for the evolving mission of the institution under investigation, and (3) laying the groundwork for political support of that mission by community influentials.

Definition of Terms

Economic development. In the context of this study, economic development refers to the systematic, organized promotion of economic growth and business activity. As applied to state action, it includes efforts to create new jobs, reduce unemployment, and strengthen the current industrial base. The community college contribution to economic development entails the creation of a highly

skilled workforce via conventional occupational education programs and more specialized training and services through contracts and partnerships.

Economic environment. For purposes of this study, the economic environment comprises all conditions identified as having direct implications for the nation's present and future training and manpower needs.

Community college. For purposes of this discussion, community, junior, technical, and two-year college are used synonymously to refer to institutions providing postsecondary education and training at a level less than the baccalaureate degree.

Occupational education. Occupational education refers to credit courses and certificate and degree programs at the postsecondary level, not designed for transfer to senior institutions but rather leading to direct employment or career advancement upon completion. Occupational education includes such designations as technical, semi-professional, paraprofessional, and terminal education, but not vacational education, which is reserved for preparation of less than college grade.

Contract programs. In a contract program, a community college is effectively hired to design and provide specialized training needed and paid for by an organization. Any public funding is incidental, deriving from the college's discretionary use of its local (ad valorem)

support or from the associated enrollment submitted for reimbursement under a state funding formula.

Partnership. A partnership is a collaborative arrangement for training or services between a community college and an organization, supported by specially targeted state funding.

Articulation. Articulation refers to the alignment or coordination of community college occupational education programs with those offered at the secondary or four-year level or with noncollegiate training programs sponsored by business or public agencies. The essential element is to assure a smooth transition of students from one level to another without unnecessary delay or duplication of effort; articulation agreements may involve the formal award and transfer of credit.

Career ladder. This is an expression denoting provisions designed to facilitate students' cycling in and out of the institution for training and retraining throughout their working lives for continuing development and advancement.

High technology. High technology industries devote much of their efforts to scientific research and development, or they rely significantly for their products and processes on near-term scientific research. Examples include electronics, computers, robotics, word and data processing, telecommunications, and biotechnology. High

technology training creates the workforce necessary to support high technology industry.

Technology transfer. This is the transmission of research and development results to the local or operational level. As contrasted with high technology training, technology transfer entails direct assistance with applications of technology.

Crosstraining. Crosstraining is an expression denoting occupational education's long-held goal of teaching broad generic competencies that are transferable across families of occupations.

Developmental education. In the context of this study, developmental education is the community college provision designed to prepare students with serious basic skills deficiencies for entry into occupational education programs.

General education. In the context of this study, general education is the component of community college occupational education programs designed to strengthen students information skills and to create well rounded individuals possessing life skills as well as technical skills.

Information skills. Information skills refer to the analysis, synthesis, and evaluation of qualitative and quantitative data, including the ability to read critically, to conceptualize, to draw conclusions, and to communicate such understanding verbally or in writing.

Employability skills. These skills help a student obtain and keep a job. Included are effective communication, good work habits, appropriate personal appearance, and successful application techniques.

Two considerations motivated the selection of Miami-Dade Community College as the subject for this case study. First was that institution's recent confirmation as American's most highly regarded community college - a "beacon for the movement toward educational excellence . . . in all aspects of the comprehensive mission of the community college" - by a panel of nationally recognize experts in the community college field (Rouche & Baker, 1985, p.21). The panel took particular note of the institution's traditional insistence upon developing data to substantiate its results. And second was Miami-Dade Community College's recently stated intention to conduct a two-year investigation of all components of its mission within the services area. This case study was the first step in that investigation providing a pretest of environmental perceptions and priorities and identifying issues detrimental to political support of the mission by community influentials.

Development of the Instrument

The review of literature treating the community college response to environment generated a universe of potential environmental adaptations for consideration by any given institution. These were distilled into a 31-item survey

instrument following guidelines laid down by Isaac and Michael (1978), Best (1977), and Babbie (1973). All three writers agreed on the importance of a cover letter signed by the highest ranking college official available.

Several considerations further guided the selection of items and the construction of the instrument. First was the need to collect quantifiable data on a comprehensive and representative range of possibilities. Two ratings - (1) Important to Do, (2) Support with Tax Funds - were attached to each item, and in view of the data analysis projected, a five-point Likert scale was utilized on both dimensions. Second was the goal to develop recommendations at the level of policy, leaving the details of implementation to the discretion of the institution. The specifics of how the college might provide a particular service were not included in the associated item unless these were judged to be at issue. Third was the need to keep the instrument short enough to secure a usable rate of response from busy high-level executives, and closely related to this was the need to employ nontechnical and unambiguous language so the items would be meaningful to external respondents. A conscious effort was made to define unfamiliar terms in the stems of the questions themselves.

These items were incorporated into a survey instrument and submitted to an expert jury whose members were selected on the basis of four criteria: (1) their broad knowledge of

economic conditions in the local environment, (2) their representative distribution across the spectrum of local business and industry, (3) their prior association with and understanding of the institution, and (4) their political influence within the community. The survey was designed to (1) confirm the institution's current response, (2) provide guidance for future directions, and (3) lay the groundwork for political support by community influentials. The specific recommendations sought were at the level of policy, leaving implementation to the discretion of the institution.

A final consideration was the need to deal with constraints peculiar to the environment of the subject institution. For example, Miami-Dade Community College is not designated as an Area Vocational Center, which, under State of Florida regulations, precludes the institution's offering programs of less than college level. Moreover, in Florida, the Associate of Science degree awarded in occupational programs is defined as nontransferable, rendering moot the question of articulating it with senior institutions. On the other hand, the nearby regional state university has been assigned official responsibility for service to small business. The judgment was made that with adequate political backing, Miami-Dade could gain entry into this market, hence the inclusion of a related item.

Pretesting the Instrument

In accord with the previously cited guidelines for questionnaire construction, the survey instrument was extensively pretested and refined with the assistance of Miami-Dade personnel chosen for their specific expertise. The president reviewed the instrument and concluded that the range of items was well matched with the college's aspirations and did not exceed its potential for achievement with suitable political backing. The director and two staff members of the Institutional Research Office suggested several technical revisions and verified that the item scaling was appropriate for the analysis projected. Two English composition teachers provided advice regarding style and word usage, and a reading specialist declared the required reading level to be appropriate for the projected survey population. A group of 10 administrators and faculty having experience in the local business community concluded that the items were sufficiently jargon free to be understood unambiguously. Finally, this group actually completed the questionnaire, requiring an average time of approximately 15 minutes.

Selection of the Survey Sample

Implicit in the case study design were three goals: (1) to elicit environmental sanction of the college's current response, (2) to determine acceptable future directions, and (3) to lay the groundwork for political

support of the institutional mission. Thus a conscious decision was made to select an expert jury rather than a random sample of the business community. Jury members were selected on the basis of four criteria: (1) their reputed broad knowledge of economic conditions in the local environment, (2) their representative distribution across the entire spectrum of local business industry, (3) their prior association with and understanding of the college, and (4) their standing and political influence within the community. From a mailing list comprising the entire membership of the Greater Miami Chamber of Commerce, the researcher identified 450 persons judged to fit the criteria most closely. This selection was validated by a Miami-Dade team consisting of the president, the dean of occupational education, the director of the college's Center for Business and Industry, and one academic dean.

Collection of Data

The survey instrument was mailed to the prospective jury on October 7, 1985, along with a cover letter asking them to complete and return it immediately. The cut off date for returns was set at six weeks; all usable responses received by then were included in the analysis. Numbering 100 in total, the respondents were distributed across the

various bands of the business and industry spectrum as follows:

Manufacturing	9
Service	21
Medical	12
Retailing	13
Foreign Trade	12
Banking	9
Utilities	5
Communications	10
Small Business	9
	100

Data Treatment

For each item, the arithmetic average of all 100 individual ratings was calculated on the "Important to Do" dimension and on the "Support with Tax Funds" dimension. A percentage of positive responses on each dimension as calculated for each item from the sum of "agree" and "strongly agree" ratings. A percentage of negative responses on each dimension as calculated for each item from the sum of "disagree" and "strongly disagree" ratings. The percentage of undecided responses on each dimension carried the balance for each item. An item ranking from highest to lowest mean was constructed on each dimension; the two rankings were analyzed for general trends. Finally, an analysis of all relevant measurements was conducted on an item-by-item basis. Perceived priorities were assessed and interpreted; implications for policy were discussed.

SECTION II

THE CASE STUDY

To demonstrate the feasibility of determining a single institution's economic development mission through a formal investigation of its environment, a case study of one comprehensive urban community college was undertaken. Chapter One of this report describes the design and procedures employed in the case study survey, including (1) the selection of Miami-Dade Community College as subject of the study, (2) the development of the survey instrument (see Appendix for the final version), (3) the selection of an expert jury, and (4) the collection and treatment of data. In this chapter, the findings of the case study survey are presented and analyzed, first, in terms of general trends and second, on an item-by-item basis. The chapter concludes with an interpretive summary.

Presentation of Findings

Table 1 presents the several measurements used to analyze the jury's response on the "Important to Do" dimension for each of the survey instrument's 31 items. Column four contains the arithmetic average of all 100 individual importance ratings for each of the 31 items, from highest to lowest; accordingly, ranks ranging from one to 31 are listed in column one. Column two and three, respectively, list the item identification number (from the survey instrument) and a short verbal description of each

item. Column five contains the percentage of positive responses (calculated from the sum of "agree" and "strongly agree" ratings) for each item. Column six contains the percentage of "undecided" votes for each item. And column seven contains the percentage of negative responses (calculated from the sum of "disagree" and "strongly disagree" ratings) for each item.

Table 2 presents the corresponding measurements for the jury's response on the "Support with Tax Funds" dimension for each of the survey instrument's 31 items. The significance of the horizontal partition lines on each table is explained in the following discussion of general trends.

General Trends

As judged by their mean scores, all items received positive support on the "Important to Do" dimension (Table 1). Indeed, items through rank 18 (upper solid line) scored means above the 4.0 level, indicating strong approval. Items ranked 19 through 27 (lower solid line) scored means between 3.5 and 4.0, still solid approval, but somewhat lower priority than for the first grouping. Finally,, items ranked 28 through 31 scored means below 3.5, but still above 3.0, indicating acceptance but lowest priority. It is also significant that positive vote ("agree" plus "strongly agree") proportions exceeded 75 percent for items through rank 21. Moreover, these remained at 50 percent or higher through rank 29, falling below 50

percent only for ranks 30 and 31. The significance of means, ranks, and vote proportions is analyzed below on an item-by-item basis. For now, it is sufficient to point out that all items were recognized as legitimate fields of endeavor for the college, some more enthusiastically than others.

With regard to the "Support with Tax Funds" dimension (Table 2), the first point to recognize is that each item's tax support mean is a smaller number than its importances mean. This was entirely predictable; philosophical support is always easier to garner than financial support. Moreover, the slippage is consistent with the findings of Doucette (1983), who surveyed several constituencies of the Arizona community college system, asking the same two questions about a different selection of items. The implication is that the "Support with Tax Funds" dimension must be interpreted on the basis of all available evidence, rather than in terms of means alone.

Table 2 contains three significant landmarks. The first is between ranks 17 and 18 (broken line), where means shift from above to below the 3.0 level. The second is between ranks 13 and 14 (upper solid line), where the proportion of positive votes (the sum of "agree" and "strongly agree") shifts from above to below 50 percent. The third is between ranks 24 and 25 (lower solid line), where the proportion of negative votes (the sum of

TABLE 1

Measurement of the "Important to Do" Dimension

Rank (a)	Item Number	Item Description	Mean	Percent Positive (b)	Percent Undecided	Percent Negative (c)
1	9	Information Skills	4.64	95	3	2
2	8	Employability Skills	4.52	95	3	2
3	1	Credit Programs for College Age	4.48	94	1	5
3	11	Cooperative Work Experience	4.48	99	1	0
5	1	Instructors from Industry	4.43	94	3	3
6	2	Credit Programs for Older Groups	4.39	94	3	3
7	4	Coordination with High School Programs	4.38	87	6	7
8	20	Meet Critical Manpower Shortages	4.37	93	4	3
9	24	High Technology Training	4.23	89	8	3
10	19	Industrial Recruitment	4.22	84	11	5
11	23	Retrain Workers with Obsolete Skills	4.21	93	3	4
12	21	Programs for Changing Job Requirements	4.19	89	6	5
13	10	Career Counseling and Job Placement	4.18	88	9	3
13	12	Contracts with Local Firms	4.18	84	12	4
15	13	Faculty Training in Local Business/Industry	4.17	82	14	4
15	22	Programs for Targeted Unemployed Groups	4.17	85	6	9
17	5	Lifelong Training/Retraining	4.15	84	12	4
18	7	General Education Component	4.14	78	17	5
19	6	Crosstraining	3.99	76	20	4
20	17	Programs for Professional Organizations	3.97	83	8	9
21	3	Developmental Instruction Component	3.90	77	8	15
22	18	Credit for Prior Learning, Acceleration	3.78	73	16	11
23	26	Assistance to Small Business	3.74	68	20	12
24	27	Courses in Foreign Trade	3.64	65	24	11
24	29	Intensive Foreign Language/Customs	3.64	66	17	17
26	25	Technology Transfer	3.58	61	20	19
27	15	Union Apprentice Training	3.54	64	13	23
28	16	Union Education Benefits	3.38	57	22	21
29	30	Programs for Foreign Students	3.36	50	30	20
30	28	Assistance to Firms in Foreign Trade	3.18	47	24	29
31	31	Technical Assistance to Foreign Countries	3.1	38	36	26

(a) Tied ranks are listed in before-rounding order.
(b) Sum of "Agree" and "Strongly Agree"
(c) Sum of "Disagree" and "Strongly Disagree"

TABLE 2

Measurement of the "Support with Tax Funds" Dimension

Rank (a)	Item Number	Item Description	Mean	Percent Positive (b)	Percent Undecided	Percent Negative (c)
1	9	Information Skills	3.98	73	12	15
2	1	Credit Programs for College Age	3.97	75	11	14
3	8	Employability Skills	3.80	67	14	19
4	2	Credit Programs for Older Groups	3.77	67	18	15
5	22	Programs for Targeted Unemployed Groups	3.75	67	16	17
6	3	Developmental Instruction Component	3.73	68	15	17
6	4	Coordination with High School Programs	3.73	62	22	16
8	20	Meet Critical Manpower Shortages	3.72	65	18	17
9	19	Industrial Recruitment	3.61	60	21	19
10	23	Retrain Workers with Obsolete Skills	3.52	57	24	19
11	7	General Education Component	3.48	53	26	21
12	10	Career Counseling and Job Placement	3.41	52	22	26
13	14	Instructors from Industry	3.36	52	15	33
14	24	High Technology Training	3.21	49	21	30
15	6	Crosstraining	3.20	41	32	27
16	11	Cooperative Work Experience	3.16	42	24	34
17	5	Lifelong Training/Retraining	3.06	39	27	34
18	18	Credit for Prior Learning, Acceleration	2.86	32	27	41
19	27	Courses in Foreign Trade	2.77	29	30	41
20	21	Programs for Changing Job Requirements	2.73	30	21	49
21	26	Assistance to Small Business	2.72	28	23	49
22	29	Intensive Foreign Language/Customs	2.65	29	23	48
23	25	Technology Transfer	2.58	23	27	50
24	13	Faculty Training in Local Business/Industy	2.57	22	28	50
25	12	Contracts with Local Firms	2.45	20	28	52
26	15	Union Apprentice Training	2.38	20	22	58
27	28	Assistance to Firms in Foreign Trade	2.23	9	30	61
28	17	Programs for Professional Organizations	2.18	14	20	66
29	30	Programs for Foreign Students	2.09	13	20	67
30	31	Technical Assistance to Foreign Countries	2.03	11	18	71
31	16	Union Education Benefits	1.97	9	22	69

(a) Tied ranks are listed in before-rounding order.
(b) Sum of "Agree" and "Strongly Agree"
(c) Sum of "Disagree" and "Strongly Disagree"

"disagree" and "strongly disagree") shifts from less to more than 50 percent. These landmarks define three regions. From one through rank 13 is considered the range of positive approval for tax-based support - as indicated by means safely above 3.0 and majority positive response proportions. From rank 25 downward is considered the range in which tax-based support is clearly disapproved - as indicated by low means and majority negative response proportions. A review of the verbal descriptions in this range reveals items of two types: (1) items of highly localized benefit and (2) items of benefit to foreign individuals or institutions. In both cases, the jury judged the associated costs not to be the responsibility of the domestic public tax base.

Finally, from rank 14 through rank 24 defines a grey area; the means and the positive and negative response percentages fail to establish a clear mandate. Furthermore, the percentage of undecided votes achieves its maximum value within this range and is comparatively high throughout. A review of the corresponding verbal descriptions reveals (1) items than, in spite of their more detailed descriptions on the questionnaire, may not have been well-understood (e.g., Crosstraining, Credit for Prior Learning), (2) items of a highly nontraditional nature (e.g., Technology Transfer, Intensive Courses in Foreign Language/Customs), and (3) items for which benefits are obviously shared

between the public and private sectors (e.g., Cooperative Education, Faculty Training in Local Business/Industry). Two overall interpretations seem reasonable: (1) Financial support should be shared between tax-based sources and user fees, and (2) the college would be well advised to expend some effort in clarifying these issues for community influentials, especially regarding items ranked 18 through 24, for which the tax means are less than the 3.0 level.

Item by Item Analysis

In the following discussion, the unabridged wording of each item statement from the survey instrument is presented along with the corresponding importance and tax means and ranks. When germane to the subsequent analysis, positive, negative, and undecided response proportions are cited from Tables 4-1 and 4-2. Cross-item comparisons are included when appropriate.

1. Offer credit instruction in occupational areas to prepare students of traditional college age for immediate employment: Importance Mean = 4.48 (rank 3), Tax Mean = 3.97 (rank 2).

The means alone are sufficient for analysis here. Unquestionably, there is strong support, philosophically and financially, for this the heart of the college's economic development effort. It should be noted, however, that the item did not measure the extent to which the range of program offerings is perceived as compatible with local

demands. Achievement of such compatibility is an ongoing responsibility of strategic-level administration.

2. Offer credit instruction in occupational areas to prepare students older than traditional college age for immediate employment: Importance Mean = 4.39 (rank 6), tax Mean = 3.77 (rank 4).

Again, the means alone are sufficient for analysis. The college was clearly authorized to include working-age adults in the population eligible for participation in occupational education programs. The legitimacy of tax-based support for the effort was also confirmed.

3. Offer developmental programs to enable students with serious basic skills deficiencies to prepare for occupational programs: Importance Mean = 3.90 (rank 21,) Tax Mean = 3.73 (rank 6).

As indicated by a tax mean of sixth rank and a two-thirds majority positive vote, the panel clearly recognized the provision of remedial education as a public obligation. That the corresponding importance mean achieved only 21st rank, however, suggests the jury's considerable reservation that such is a college-level responsibility, an interpretation corroborated by several written-in comments to that effect. This is an issue about which the college should exert no small effort in cultivating community understanding.

4. Coordinate its occupational programs with those offered by local high schools, to assure a smooth transition of students from one level to the other without unnecessary delay of duplication of effort: Importance Mean = 4.38 (rank 7), Tax Mean = 3.73 (rank 6).

The strong importance and tax means speak for themselves. That high-level business and industry leaders would recognize the necessity of coordination is hardly surprising; their willingness to pay for administrative overhead, however, is gratifying.

5. Allow students to cycle in and out of the institution for training and retraining throughout their working lives, for continuing development and advancement: Importance Mean = 4.15 (rank 17), Tax Mean = 3.06 (rank 17).

This item demonstrates that sole reliance on ranks is as futile as sole reliance on the absolute values of means. Both means achieved 17th rank in their respective distributions, which suggest lukewarm approval on both dimensions. Value of 4.15 achieved by the importance mean, however, represents a strong rating in absolute terms. The slippage to just above the 3.0 level by the tax mean reflects the panel's feeling that access to lifelong retraining is an individualized benefit, the cost of which should at least partially be borne by the recipient. The enfranchisement of

the working-age population at public expense, noted in item two, may be restricted to an initial opportunity.

6. Teach broad technical skills that are transferable from one job to another: Importance Mean = 3.99 (rank 19), Tax Mean = 3.20 (rank 15).

Both means indicate solid, if not overwhelming, support. The slippage of the importance rank for this item, compared to item five, may reflect the jury's feeling that lifelong retraining is a more feasible approach to dealing with the changeable nature of the work world than initial broad training. In any case, the relatively high undecided vote percentages (indeed, the single largest on the tax dimension) reveal considerable confusion here. The concept needs clarification in the community.

7. Include a general education component - communications, humanities, and social sciences - in all occupational degree programs: Importance Mean = 4.14 (rank 18), Tax Mean = 3.48 (rank 11).

This item should be interpreted primarily on the basis of means, where both indicate solid support. That the tax rank is noticeably higher than the importance rank is a statistical artifact; several items scoring higher than item seven on the importance dimension fell below it on the tax dimension, artificially raining its tax rank. The absolute value of item seven's tax mean remained below that of its

importance mean as expected; the rank displacement does not indicate a changed priority.

8. Teach "employability skills" - effective human relations, good work habits, appropriate personal appearance, etc. - all occupational certificate and degree programs: Importance Mean = 4.52 (rank 2), Tax Mean = 3.80 (rank 3).

The means and ranks speak for themselves. The subtle message here is that the traditional socialization effects of college attendance may have been perceived as not enough. The jury has pointedly asked that a special effort be made.

9. Emphasize the information skills of reading, writing, and computation in all occupational courses and programs: Importance Mean = 4.64 (rank 1), Tax Mean = 3.98 (rank 1).

There is little room for interpretation here; again the means and ranks speak for themselves. Reading, writing, and computation skills were perceived as providing the basis upon which all higher ordered skills are built, the best hedge against technical obsolescence in the rapidly changing world of work. Naisbitt's (1982) information age has unquestionably dawned in Miami/Dade County.

At this point, it is convenient to compare the jury's importance ratings for item seven (the general education component) and item nine (information skills). As depicted in the literature, general education usually refers to

courses in communications, humanities, and the social sciences, the rationale being to increase students' adaptability and awareness of life experiences (J.L. Campbell, 1982). But these are also the courses in which freshmen and sophomores have traditionally done the most reading and writing, which along with computing have lately achieved prominence as information skills (McCabe, 1983). As the concepts tend to overlap, item nine was included specifically to isolate the information skills from the life skills nested in item seven. In ranking the two, the jury expressed a strong bias toward pragmatism, as expected, clearly favoring the information skills. Amidst this overwhelming demonstration of support for information skills, however, one should not lose track of the still strong rating accorded to life skills in the absolute terms of an importance mean solidly above the 4.0 level.

10. Provide career counseling and job placement services to students in occupational programs: Importance Mean = 4.18 (rank 13), Tax Mean = 3.41 (rank 12).

Means and ranks indicate solid support on both dimensions. This is the second case where tax support was strongly recommended for a nonteaching activity that will clearly generate overhead costs. The strength of these ratings may provide partial confirmation of Ammon and Robertson's (1985) contention that employers concerned about

high rates of turnover are increasingly desirous that community colleges accept responsibility for helping students choose occupations that are personally as well as monetarily satisfying - that is, occupations with which they are likely to remain contented over the long term.

11. Cooperate with local business and industry to provide opportunities for students to work concurrently in the occupations they are preparing for: Importance Mean = 4.48 (rank 3), Tax Mean = 3.16 (rank 16).

The unexpectedly high value and rank of this item's importance mean is corroborated by its achieving the largest single positive vote proportion of 99 percent with one undecided vote and no negatives. Cooperative education was clearly recognized as a legitimate function of the college. The decline to 16th rank of the corresponding tax means is simply a reflection of the jury's entirely reasonable conclusion that the employers benefit as much as the interning students and thus should pay a fair share of the associated costs.

12. Contract to provide specific training needed by local companies: Importance Mean = 4.18 (rank 13), Tax Mean = 2.45 (rank 25).

The strong importance mean confirms the college's license to operate in the arena of contract programs, and, further it reflects positively on the quality of the

training provided to date. The low tax mean in combination with a 52 percent negative vote simply indicates that the client companies will be expected to pay for the services rendered.

13. Provide opportunities for occupational faculty to update their competencies by working in local business and industry: Importance Mean = 4.17 (rank 15), Tax Mean = 2.57 (rank 24).

As indicated by an importance mean above the 4.0 level and a positive vote proportion of 82 percent, the jury clearly recognized the necessity of recurrent real-world experiences for occupational faculty. The drop of the tax mean to the lowest rank of the grey area is consistent with the idea that the employing company realizes considerable benefit from the productive effort of the interning faculty member and thus should be willing to pay a substantial share of the associated costs.

14. Locate and hire industry personnel with special competencies to serve as instructors in occupational courses: Importance Mean = 4.43 (rank 5), Tax Mean = 3.36 (rank 13).

The absolute value and rank of the importance mean indicate a high priority here; clearly the jury recognized the value of injecting a practical orientation into the classroom experience, along with an exposure to state-of-the-art industrial techniques. Hiring industry

experts on a part-time basis may also have been recognized as the most practical way to staff some of the more exotic program offerings for which demand is a small but important to meet. The tax mean's location in the range of solid approval reflects the obvious reality that paying faculty salaries is a public responsibility. Its drop in rank relative to the importance mean may indicate the jury's feeling that industry bears some responsibility to help; the more industry-specific the college's programs are, the more likely it will be that industry can reduce its in-house training expenditures. In any case, it will be difficult for the college to compete with the salary scales paid in industry.

Together, items 13 and 14 constitute both branches of a faculty-staff exchange program. In view of the mutual public-private benefits flowing from such exchanges, and considering the jury's reactions to the separate components discussed above, it seems reasonable to project a preferred funding arrangement for exchanges: namely, that the college and the participating firm should each continue to pay the salaries of their respective agents.

15. Cooperate with unions in the development and implementation of apprenticeship training programs: Importance Mean = 3.54 (rank 27), Tax Mean = 2.38 (rank 26).

An importance mean above the 3.5 level coupled with nearly a two-thirds majority positive vote indicates approval of the concept; the importance rank of 27th, however, indicates very low priority. Probably the explanation here is a natural management bias against unions coupled with the lack of a strong union tradition in the area. In any case, the tax mean, its rank, and the negative vote proportion of 58 percent clearly indicate that this was perceived to be a highly localized benefit for which the participating union should pay the major share of costs.

16. Cooperate with unions in the development and implementation of educational benefits for their members: Importance Mean = 3.38 (rank 28), Tax Mean = 1.97 (rank 31).

This is an entirely predictable result based on the discussion for item 15 above; again, all importance measures indicate approval of the concept, but very low priority. The even lower tax mean and ranking (in fact, the lowest of all) clearly indicate the jury's feeling that this is a private benefit that should be paid for by the recipient.

17. Cooperate with professional organizations in the development and implementation of specific training programs for their members: Importance Mean = 3.97 (rank 20), Tax Mean = 2.18 (rank 28).

An importance mean of nearly 4.0 coupled with a positive vote proportion of 83 percent provides substantial

authorization to operate in this arena. Jury participation by a significant number of identifiable professionals plus the inapplicability of the union bias here probably accounts for the higher ranking of this item compared to the previous two. Nevertheless, the very low tax mean and ranking coupled with a 66 percent negative vote reaffirm the contention that user fees are the expected sources of financial support for private benefits.

18. Develop processes for students to earn credit for their prior learning, as a means to accelerate completion of degree requirements: Importance Mean = 3.78 (rank 22), Tax Mean = 2.86 (rank 18).

An importance mean substantially above the 3.0 level coupled with a positive vote proportion of nearly three-fourths establishes solid support of the concept, though the 22nd rank suggests a weak priority. The tax mean's position below the 3.0 level probably reflects lack of enthusiasm for administrative overhead, but coupled with the relatively large undecided vote proportion (27 percent), it may also indicate the jury's confusion over whether this is a public or private benefit. Further reticence may have resulted from the item description's forced choice of "credit" as the means of accomplishment - the idea that the public was being asked to pay twice for the same learning. The college would be well advised to clarify this issue in the community and determine if methods utilizing course

exemptions or advance placement, for example, would be more acceptable.

19. Develop and offer specialized training programs to attract new industry to Dade County: Importance Mean = 4.22 (rank 10), Tax Mean = 3.61 (rank 9).

Means and ranks indicate strong approval on both dimensions, a clear recognition of the need backed up by willingness to provide the necessary financial support. This result constitutes a clear mandate for program expansion, a prospect that meshes smoothly with the Legislature's recently enacted Sunshine State Skills Program (State Board of Community Colleges, 1985).

20. Develop and offer specialized training programs to meet critical manpower shortages in Dade County: Importance Mean = 4.37 (rank 8), Tax Mean = 3.72 (rank 8).

Virtually the same interpretation projected for item 19 applies here. Strong support on both dimensions indicates the existence of critical manpower shortages and recognized the college's ability to remedy them - another clear mandate for action.

21. Develop and offer specialized training programs to help employees of local firms meet changing job requirements: Importance Mean = 4.19 (rank 12), Tax Mean = 2.73 (rank 20).

The strong importance mean and rank indicate solid support of the concept. The tax mean's position below midway in the grey area coupled with a negative vote proportion of almost one-half reveals substantial reservations about public support, however. As primary beneficiary, the parent firm will be expected to pay a substantial share of the associated costs.

22. Develop and offer specialized training programs to reduce unemployment among target populations: Importance Mean = 4.17 (rank 15), Tax Mean = 3.75 (rank 5).

An importance mean above the 4.0 level in combination with a tax mean substantially above the 3.0 level unquestionably authorizes the college to operate, with public resources, in this arena. But the obvious superiority of the tax rank over the importance rank cannot be ignored. While smaller here than for item three, the difference is too large to dismiss as simple rank displacement as in item seven. The extremely strong tax rank clearly indicates the jury's concern over the problem of high unemployment among disadvantaged groups and its willingness to support the use of public funds in attacking the problem. The much lower importance rank may reflect the feeling that comprehensive programs, such as those sponsored by the federal Job Training Partnership Act, are the preferred avenue of approach. On balance, the college

should probably place more emphasis upon cooperative participation in the comprehensive programs than upon proceeding alone.

23. Develop and offer specialized programs to retrain workers with obsolete skills to work in new occupations: Importance Mean = 4.21 (rank 11), Tax Mean = 3.52 (rank 10).

The interpretation projected for items 19 and 20 applies here also. Strong support on both dimensions indicates that the problem is real and chronic, that the college is well qualified to deal with it, and that public funding for the effort is legitimate - another clear mandate for action.

At this point it is convenient, and very worthwhile, to compare and contrast the jury's responses to items 23, 5, 21, and 12. The verbal descriptions of these items were carefully worded to suggest the following distinctions among beneficiaries of training to be provided by the college: item 23, the worker who has been displaced by technological advancement; item 5, the worker attempting to climb the career ladder; item 21, the local firm struggling to keep up with changes in the economic environment; and item 12, the local firm seeking to improve its competitive position. College-supplied training for each group was solidly and equally approved: All four importance means round to the same number, 4.2; that the correspondding ranks range from

11 to 17 is essentially meaningless. But the jury established a clear set of priorities with regard to the utilization of public funds for this training: The tax means, in the order the items are listed above, are respectively 3.52 (strong), 3.06 (marginal), 2.73 (weak), and 2.45 (disapproved). It is important for college representatives to keep these predispositions clearly in mind when building a case in the community for increased financial support of college programs.

24. Develop and offer training programs in high-technology occupations: Importance Mean = 4.23 (rank 9), Tax Mean = 3.21 (rank 14).

Solid support on the importance dimension, mean and rank, indicates perceived necessity and recognition of the college as a capable provider. Slippage of the tax mean to the top position in the grey area reflects apprehension over the potentially high cost and perhaps a feeling that industry itself should share responsibility here.

25. Provide exposure to high-technology equipment so that local business and industry personnel may test its applicability to their operations: Importance Mean = 3.58 (rank 26), Tax Mean = 2.58 (rank 23).

The low ranking of the importance mean coupled with a 20 percent undecided vote indicates considerable uncertainty over a very new concept. The possibility of an 81 percent

positive vote, if the undecideds could be swung to positive, suggests that clarification of the technology transfer concept within the community could be a very productive effort. Nevertheless, the low tax mean coupled with a maximum possible positive vote of only 50 percent indicates that participating firms will be expected to pay a substantial share of the associated costs.

26. Provide direct assistance and consultation on matters related to operating a small business: Importance Mean = 3.74 (rank 23), Tax Mean = 2.72 (rank 21).

An importance mean closer to the 4.0 level than the 3.0 level coupled with a two-thirds majority positive vote suggests substantial potential for increased college activity in this area. The low importance rank may reflect the jury's awareness of Florida International University's official primacy. In any case, the low tax mean clearly indicates that the small business operators will be expected to share the costs.

27. Offer special courses related to the conduct of foreign trade: Importance Mean = 3.64 (rank 24), Tax Mean = 2.77 (rank 19).

An importance mean well above the 3.5 level provides solid encouragement to proceed; however, its low rank suggests a modest priority for this new undertaking. The undecided vote of 24 percent, third largest on the

importance dimension, suggests some confusion over the concept but holds the possibility of an 89 percent positive rating after sufficient promotion in the community. The tax mean, which shows some rank displacement, is disturbingly low for something intended primarily as an elective for regular students; the jury may have interpreted this item as a service to business. That the item requires considerable clarification in the community is further indicated by yet another large undecided vote - 30 percent, second highest on the tax dimension.

28. Provide direct technical assistance to local firms engaged in foreign trade: Importance Mean = 3.18 (rank 30), Tax Mean = 2.23 (rank 27).

An importance mean above 3.0 but second from lowest suggests weak acceptance of the college's participation in this very nontraditional activity. Several factors could be responsible, including the considerable reputation of Florida International University in this arena and the low representation of foreign trade interest on the jury. The jury may have viewed foreign trade more in terms of competition than opportunity, an interpretation consistent with the current wave of protectionist sentiment sweeping the nation ("U.S. Imports Top Exports," 1985). In any case, the third highest proportion of undecided votes (24 percent) indicates that substantial clarification and promotion will be necessary to legitimize this activity in the minds of

community influentials, and this could be a difficult task in view of a declared negative vote proportion approaching one-third. The one clear-cut finding for this item is that the participating firms will be expected to pay for services rendered.

29. Offer short-term intensive training in the language and customs of foreign countries: Importance Mean = 3.64 (rank 24), Tax Mean = 2.65 (rank 22).

The importance mean's position above the 3.5 level plus a two-thirds majority positive vote provides solid encouragement to proceed, but once again a low importance rank implies a modest priority. This rating may have suffered from some of the same environmental obstacles postulated for item 28, and an additional handicap may have been the community's continuing bitter controversy over the issue of bilingualism ("English plus' a plus," 1985). The jury correctly identified this item as a service to business; the tax mean's position in the low range of the grey area clearly indicates that participating firms will be expected to contribute substantially toward the associated costs.

30. Offer occupational certificate and degree programs to students from foreign countries: Importance Mean = 3.36 (rank 29), Tax Mean = 2.09 (rank 29.)

The importance mean's position safely above the 3.0 level indicates that the concept was at least marginally accepted as a college function, but with extremely low priority in view of the third-from-last importance rank and a positive vote proportion of only 50 percent. A concerted promotional effort in the community will obviously be necessary if philosophical support is to be enhanced; the negative vote proportion of only 20 percent gives some reason for optimism. In any case, the tax mean and rank coupled with a two-thirds majority negative vote leave no question that foreign sponsors will be expected to support such activities.

31. Provide direct technical assistance to educational institutions in foreign countries: Importance Mean = 3.11 (rank 31), Tax Mean = 2.03 (rank 30).

Virtually the same interpretation projected for item 30 applies here. An even larger undecided vote (in fact, the largest) on the importance dimension suggests an even greater need for clarification and promotion in the community, with perhaps less reason for optimism in view of the declared negative vote proportion exceeding one-quarter. Again, support from the domestic tax base was clearly judged as unacceptable.

Summary

To summarize the findings of the case study survey, it is convenient and informative to consider the items in four groups.

Group one (items one through 11) contains items describing conventional occupational education programs, including the distinctive characteristics that have evolved in response to conditions in the economic environment. For quick references and comparison, the importance and tax means scored by the 11 items in group one are listed as follows:

Item	1	2	3	4	5	6	7	8	9	10	11
I Mean	4.48	4.39	3.90	4.38	4.15	3.99	4.14	4.52	4.64	4.18	4.48
T Mean	3.97	3.77	3.73	3.73	3.06	3.20	3.48	3.80	3.98	3.41	3.16

Group one scored a composite importance mean of 4.30 and a composite tax mean of 3.57. These represent clear approval of the college's programs as currently arrayed and strong financial support for their continued growth. The programs should be available to traditional college-aged students (item one) and to older adults as well (item two). Remedial education for students unprepared to enter occupational programs directly was reluctantly approved (item three). The college's programs should be closely coordinated with those offered at the secondary level, in spite of the administrative overhead costs this obviously entails (item four). Life long training and retraining (item five) and broad initial training (item six) should be provided; the

former may be the more plausible for coping with the rapidly changing demands of the work place. That students' horizons be broadened by general education components is highly desirable (item seven); that they develop strong information skills in the process is imperative (item nine). Moreover, a special effort should be made to instill in students the traditional work ethic, lately described in terms of "employability skills" (item eight). Finally, to secure a better match between skills possessed and skills demanded, career counseling and job placement services (item 10) and opportunities for cooperative work experience (item 11) were solidly approved.

Group two (items 12 through 18) contains items describing linkages between the college and various organizational sectors of the community, representing further adaptation to the environment. The importance and tax means scored by the seven items in group two are listed as follows:

Item	12	13	14	15	16	17	18
I Mean	4.18	4.17	4.43	3.54	3.38	3.97	3.78
T Mean	2.45	2.57	3.36	2.38	1.97	2.18	2.86

Group two scored a composite importance mean of 3.92, a more modest level of approval for community linkages than for conventional programs, but still substantial approval in absolute terms. The composite tax mean was 2.54, which reflects the predominance within group two of items for which user fees were judged to be the appropriate source of

support. The latter category includes contract arrangements for providing specialized training needed by local companies (item 12), cooperation with unions in their apprenticeship (item 15) and educational benefit programs (item 16), and cooperation with professional organizations in the provision of special training for their members (item 17). The college was strongly encouraged to seek the participation of industry experts as instructors, and the legitimacy of tax-based funding for their salaries was recognized (item 14). The necessity of providing opportunities for current faculty to update their skills by working in industry was also recognized; it was deemed appropriate that the firms benefiting from the productive efforts of the interning faculty pay a fair share of costs (item 13). Finally, it was judged appropriate to recognize students' prior learning in noncollegiate training programs. Students should pay a substantial share for this highly individualized benefit, and whether credit or perhaps course exemptions is the preferred medium was unresolved (item 18).

Group three (items 19 through 26) contains items described in the literature as components of community college participation in state-sponsored economic development programs. The importance and tax means scored by the eight items in group three are listed as follows:

Item	19	20	21	22	23	24	25	26
I Mean	4.22	4.37	4.19	4.17	4.21	4.23	3.58	3.74
T Mean	3.61	3.72	2.73	3.75	3.52	3.21	2.58	2.72

Group three scored a composite importance mean of 4.09 and a composite tax mean of 3.23. These represent solid approval of college participation and, with the exceptions noted below, equally solid approval of tax-based support for the effort. The college received a clear mandate for the development of customized training programs to attract new industry (item 19), relieve critical manpower shortages (item 20), help reduce unemployment among disadvantaged groups (item 22), and retrain displaced workers for new occupations (item 23). High technology training was enthusiastically supported (item 24), technology transfer more modestly (item 25), both with the expectation of cost sharing by the benefitting firms. Retraining to help employees of local companies meet changing job requirements received substantial approval with limited public assistance (item 21). And finally the college gained solid encouragement for increased participation in the area of direct services to small businesses, again with the clear understanding that the small business operators would pay for services rendered (item 26).

Group four (items 27 through 31) contains items describing the college's potential responses to international impingements in the economic environment. The importance and tax means scored by the five items in group four are listed as follows:

Item	27	28	29	30	31
I Mean	3.64	3.18	3.64	3.36	3.11
T Mean	2.77	2.23	2.65	2.09	2.03

Group four scored a composite importance mean of 3.39, which in absolute terms, provides some encouragement to proceed, but, in relative terms, establishes a very low priority. The composite tax mean was only 2.35, a clear rejection of public funding for the group overall. Within the group, strongest approval attached to the provision of special courses in the conduct of foreign trade (item 27) and to short-term training in the languages and customs of foreign countries (item 29). The former was intended to describe an elective for regular college students; considerable clarification of the concept within the community will be required to improve its tax-support rating. As a service to business, the latter was appropriately slated for mainly private support. Direct assistance to local firms engaged in foreign trade (item 28) was approved in principle, as long as the firms pay for services rendered. Finally, the provision of technical assistance to foreign institutions engaged in occupational education (item 31) and the provision of occupational training to students from foreign countries (item 30) were recognized as legitimate college functions. But the associated costs must definitely be borne by foreign sponsors.

Findings

The survey findings reflected clear approval of the college's conventional occupational education programs and of strong tax-based support for their continued growth. These programs should be made available to traditional college-aged students and to older adults as well. Remedial education for students unprepared to enter occupational programs directly was reluctantly approved. The college's programs should be closely coordinated with those offered at the secondary level, notwithstanding the administrative overhead this will generate. Broad initial training and lifelong retraining should be provided. That student's horizons be broadened by general education components was judged desirable; that they develop strong reading, writing, and computing skills was deemed imperative. A special effort should be made to teach students the importance of effective human relations, good work habits, and appropriate personal appearance. And finally, career counseling, job placement services, and the provision of opportunities for cooperative work experience were solidly approved.

Expanded linkages with community-based agencies were approved but accorded a modest level of priority. The college was authorized to engage in contractual agreements for providing specialized training needed by local firms, cooperate with unions in their apprenticeship and educational benefit programs, and cooperate with professional

organizations in the provision of special training for their members. In all three cases, user fees were judged to be the appropriate source of financial support. The college was strongly encouraged to seek the participation of industry experts as instructors; the legitimacy of tax-based funding for their salaries was clearly recognized. The necessity of providing opportunities for current faculty to update their skills by working in industry was also recognized; the firms benefitting from the productive efforts of the interning faculty will be expected to pay a fair share of costs. Finally, it was judged appropriate to recognize students' prior learning in noncollegiate training programs, with the understanding that the students would pay a substantial share of the costs associated with this highly individualized benefit.

The college received a clear mandate for the development of customized training programs to attract new industry, relieve critical manpower shortages, help reduce unemployment among disadvantaged groups, and retrain displaced workers for new occupations. The use of tax-based funding for these developments was solidly supported. High technology training was enthusiastically supported, technology transfer more modestly, both with the expectation of cost sharing by the benefitting firms. Retraining to help employees of local companies meet changing job requirements received substantial approval with limited

public assistance. And finally, the college gained solid encouragement for increased participation in the area of direct services to small businesses, again with the clear understanding that the small business operators pay for services rendered.

The provision of special courses related to the conduct of foreign trade and short-term intensive training in the languages and customs of foreign countries attracted substantial approval. Support for the utilization of tax-based funding in these efforts was weak. As the former was intended as an elective for regular college students, considerable clarification of the concept within the community will be required to improve the acceptability of tax-based support. Direct assistance to local firms engaged in foreign trade was approved in principle, as long as the participating firms pay for services rendered. Finally, the provision of technical assistances to foreign institutions engaged in occupational education and the provision of occupational training to students from foreign countries were recognized as legitimate college functions. But the associated costs must definitely be borne by foreign sponsors.

Recommendations For Further Research

A number of topics for further research are suggested by this study. The following are recommended.

Specific to Miami-Dade Community College:

1. During the analysis of data, several issues were identified as requiring clarification within the community. Moreover, the general funding priorities deduced from the jury's responses must now be translated into specific recommendations (to the state) of public and private shares. A cooperative study involving education give and take between college personnel and community influentials is recommended for this.
2. The college should replicate the methodology of the case study survey in other mission areas; the community education, public service, and developmental education missions are highly recommended, due to the controversy currently surrounding them.
3. Considering the highly publicized image of Miami as the "Gateway to the Americas," the jury's ratings on items related to foreign trade education and training were surprisingly low. A study should be conducted to determine barriers preventing greater acceptance of this mission.

To community colleges in general:

1. Other community colleges should replicate the methodology of this study to determine their own environmentally sanctioned missions. If not the

actual survey instrument developed in this study, then the review of nationwide antecedent movements in Chapter Three should be helpful in studying the potential economic development mission.

2. Preliminary to such efforts, many institutions will need to conduct studies to determine the identity of useful key-informants and community influentials.
3. Community colleges should expend more effort on follow-up studies to assess the subsequent performance of participants in their occupational education and customized training programs. The review of literature describing such programs detected a paucity of objective evaluation, at least in published form.

APPENDIX

BUSINESS AND INDUSTRY SURVEY

MIAMI-DADE COMMUNITY COLLEGE
Business and Industry Survey

Directions: For each item, please mark one box labeled "Important to do" and one box labeled "Support with tax funds."

Miami-Dade Community College Should:

		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1. Offer credit instruction in occupational areas to prepare students of traditional college age for immediate employment.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
2. Offer credit instruction in occupational areas to prepare students older than traditional college age for immediate employment.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
3. Offer developmental programs to enable students with serious basic skills deficiencies to prepare for occupational programs.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
4. Coordinate its occupational programs with those offered by local high schools, to assure a smooth transition of students from one level to the other without unnecessary delay or duplication of effort.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
5. Allow students to cycle in and out of the institution for training and retraining throughout their working lives, for continuing development and advancement.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
6. Teach broad technical skills that are transferable from one job to another.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
7. Include a general education component-- communications, humanities, and social sciences-- in all occupational degree programs.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5

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MIAMI-DADE COMMUNITY COLLEGE
Business and Industry Survey

Directions: For each item, please mark one box labeled "Important to do" and one box labeled "Support with tax funds."

Miami-Dade Community College Should:

		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
8. Teach "employability skills"-- effective human relations, good work habits, appropriate personal appearance, etc.-- in all occuptional certificate and degree programs.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
9. Emphasize the information skills of reading, writing, and computation in all occuptional courses and programs.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
10. Provide career counseling and job placement services to students in occupational programs.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
11. Cooperate with local business and industry to provide opportunities for students to work concurrently in the occupations they are preparing for.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
12. Contract to provide specific training needed by local companies.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
13. Provide opportunities for occupational faculty to update their competencies by working in local business and industry.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
14. Locate and hire industry personnel with special competencies to serve as instructors in occupational courses.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
15. Cooperate with unions in the development and implementation of apprenticeship training programs.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5

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MIAMI-DADE COMMUNITY COLLEGE
Business and Industry Survey

Directions: For each item, please mark one box labeled "Important to do" and one box labeled "Support with tax funds."

Miami-Dade Community College Should:

		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
16. Cooperate with unions in the development and implementation of educational benefits for their members.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
17. Cooperate with professional organizations in the development and implementation of specific training programs for their members.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
18. Develop processes for students to earn credit for their prior learning, as a means to accelerate the completion of program requirements.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
19. Develop and offer specialized training programs to attract new industry to Dade County.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
20. Develop and offer specialized training programs to meet critical manpower shortages in Dade County.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
21. Develop and offer specialized training programs to help employees of local firms meet changing job requirements.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
22. Develop and offer specialized training programs to reduce unemployment among target populations.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
23. Develop and offer specialized programs to retrain workers with obsolete skills to work in new occupations.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5

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MIAMI-DADE COMMUNITY COLLEGE
Business and Industry Survey

Directions: For each item, please mark one box labeled "Important to do" and one box labeled "Support with tax funds."

Miami-Dade Community College Should:

		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
24. Develop and offer training programs in high-technology occupations.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
25. Provide exposure to high-technology equipment so that local business and industry personnel may test its applicability to their operations.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
26. Provide direct assistance and consultation on matters related to operating a small business.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
27. Offer special courses related to the conduct of foreign trade.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
28. Provide direct technical assistance to local firms engaged in foreign trade.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
29. Offer short-term intensive training in the language and customs of foreign countries.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
30. Offer occupational certificate and degree programs to students from foreign countries.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5
31. Provide direct technical assistance to educational institutions in foreign countries.	Important to do	1	2	3	4	5
	Support with tax funds	1	2	3	4	5

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